

THE COMMISSIONERS of the state reservation at Niagara requested Mr. David F. Day, the well known botanist of Buffalo, to prepare a list of the flora of the vicinity of the falls. This list⁴ comprises 909 species. Common names and remarks on the localities and relative abundance are given. From Mr. Day's reputation for painstaking accuracy, we are sure that the catalogue may be depended upon.

THE FIRST BULLETIN⁵ of the division of pomology of the Department of Agriculture relates wholly to fruits which can only be cultivated in the Southern States or California. Two Japanese plums and three varieties of Japanese persimmons are figured in colors, and certainly look tempting enough. The remainder of the report gives accounts of the growing of various tropical and semi-tropical fruits which are either now cultivated or might prove profitable in the localities named. The number is surprisingly large.

NOTES AND NEWS.

DR. DOUGLAS H. CAMPBELL has been elected to the chair of botany in the State University of Indiana.

IN THE description of *Polytrichum Ohioense*, in the August GAZETTE, p. 200, Crowdin Mount, N. C., should read Crowder's Mount.

THE PROFESSORSHIP of botany at Bryn Mawr College has been consolidated with that of biology, under the charge of Dr. E. B. Wilson. We are sorry to record this backward step.

THE BOTANICAL CLUB, A. A. A. S., registered nearly sixty at Cleveland. So great has been the exodus to Europe this summer that that number may be looked upon as large. The absence of botanists from east of the Hudson was conspicuous.

MR. B. T. GALLOWAY, at present assistant in the section of vegetable pathology of the Department of Agriculture, will become the head of the section when Mr. Scribner assumes his duties at the University of Tennessee. The change will occur in October.

DR. DELAMARE, whose work in connection with the Flora of Miquelon was noticed in this journal for June (p. 168), died recently at Miquelon, as we learn from M. Jules Cardot. Dr. Delamare was an indefatigable collector, and had almost completed his botanical exploration of the island.

WERMINSKI gives¹ a brief account of his researches upon the nature of aleurone grains. He concludes that they are formed from vacuoles which contain proteids in solution. By loss of water in ripening the substance of the aleurone grain is precipitated through a physico-chemical process.

⁴DAY, DAVID F.—A catalogue of the flowering and fern-like plants growing without cultivation in the vicinity of the Falls of Niagara. pp. 67. 8vo. Troy: The Troy Press Co., printers. 1888.

⁵VAN DEMAN, H. E.—Report on the condition of tropical and semi-tropical fruits in the U. S. in 1887. pp. 149. pl. col. iii. 8vo. Washington: Gov't Printing-office. 1888.

¹Ber. d. deut. bot. Gesellschaft vi. 199 (July 24, 1888).

PROFESSOR JOS. F. JAMES, lately of Miami University, will become professor of botany at the State Agricultural College of Maryland at the opening of the college year in September. The institution is located very near Washington, so that scientific companionship is not lacking for the teachers there.

THE EXTENT of Dr. Gray's fame is well illustrated by the fact that many of the smaller foreign periodicals, not especially botanical, have given longer or shorter notices of his life and works. Our attention is called to such a sketch, written by Dr. P. Magnus, in the *Naturwissenschaftliche Rundschau*, published at Braunschweig, Germany.

THE MEETING of the botanical section of the Philadelphia Academy of Natural Sciences held on February 13 was devoted to memorials of Dr. Gray by various members, each treating of a different phase of his work. Addresses were made by Mr. W. M. Canby, Prof. J. T. Rothrock, Dr. W. P. Wilson, and Mr. Thomas Meehan. A suitable series of resolutions offered by Mr. J. H. Redfield was then passed and ordered on record.

IN THE LAST FASCICLE of the *Annales des Science Naturelles (botanique)* (vol. vii, parts 2, 3, 4) MM. Bornet and Flahault continue their revision of the Nostocaceæ of French herbaria. The present part includes the eight genera of the Nostocaceæ, of which two, a new one, *Wollea*,² and *Hormothamnion*, are not found in Europe. From the enormous synonymy of some species, we judge that the revision has come none too soon.

SECTION F, at the Cleveland meeting A. A. A. S., was rather unfortunate in its secretaryship. The secretary, Dr. N. L. Britton, was absent at Kew, England. Mr. B. E. Fernow, chief of the forestry division, Department of Agriculture, was elected secretary *pro tem.*; but on Monday morning he received word of the death of his wife's father, and was obliged to leave. The conclusion of the duties devolved upon Mr. C. R. Barnes, who was elected at the morning session.

DE VRIES has lately studied the young absorbing roots of plants with reference to the mechanics of the tissues. He concludes from the following experiments that either the so called "bundle-sheath" (*Kernscheide*) or the pericambium, or both, bear the root-pressure. A root of *Iris Pseudacorus*, 12 cm. long, with the root tip uninjured, was placed under a pressure of 35 cm. of mercury. Every fifteen minutes a microscopically thin tangential section was cut from the root at a place 2 cm. from the tip. No water appeared at the surface of the cut until the sheath was reached, when immediately a drop was exuded. Similar experiments with like results were made upon the roots of *Dipsacus sylvestris* and the stems of various plants. He also shows how the sheath is adapted to resist the filtration of the water under root-pressure before it becomes suberized. De Vries also states that the movement of protoplasm in the cells which take up or transport water is such as to facilitate its passage to the vascular system in the interior. In the root-hairs the rotation is from one end to the other; in the epidermis parenchyma sheath and pericambium the chief stream passes over the tangential and transverse walls. The movement is strongest in the cells in which the absorption of water is greatest. As the suberization of the walls proceeds it gradually decreases, and ceases when the process is complete.³

²Dedicated to our well known algologist, Rev. Francis Wolle, and including his *Sphaerozyga saccata*.

³See abstract in Bot. Centralblatt, Band xxxv. 76 (1888).